

# 9/182279

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File: USPT

Nov 21, 2000

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DOCUMENT-IDENTIFIER: US 6150921 A

TITLE: Article tracking system

DATE-ISSUED: November 21, 2000

## INVENTOR-INFORMATION:

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McKinney; Kenelm	Melrose	MA		

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NAME	CITY	STATE	ZIP CODE	COUNTRY	TYPE CODE
PinPoint Corporation	Billerica	MA			02

APPL-NO: 08/ 953755 [PALM]  
DATE FILED: October 17, 1997

## PARENT-CASE:

REFERENCES TO RELATED APPLICATIONS This application claims priority from a provisional application Ser. No. 60/028,658, filed Oct. 17, 1996, a provisional application Ser. No. 60/044,321, filed Apr. 24, 1997, and a provisional application Ser. No. 60/044,245, filed Apr. 24, 1997.

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FIELD-OF-SEARCH: 340/825.54, 340/825.34, 340/825.49, 340/573.1, 340/573.4, 340/10.1, 342/42, 342/44

## PRIOR-ART-DISCLOSED:

## U.S. PATENT DOCUMENTS

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0 467 036 A2	June 1990	EP	
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ART-UNIT: 275

PRIMARY-EXAMINER: Horabik; Michael

ASSISTANT-EXAMINER: Dalencourt; Yves

ATTY-AGENT-FIRM: Hutchins, Wheeler & Dittmar

ABSTRACT:

System for tracking mobile tags. Cell controllers with multiple antenna modules generate a carrier signal which is received by the tags. Tags shift the frequency of the carrier signal, modulate an identification code onto it, and transmit the resulting tag signal at randomized intervals. The antennas receive and process the response, and determine the presence of the tags by proximity and triangulation. Distance of a tag from an antenna is calculated by measuring the round trip signal time. The cell controllers send data from the antenna to a host computer. The host computer collects the data and resolves them into positional estimates. Data are archived in a data warehouse, such as an SQL Server.

38 Claims, 23 Drawing figures

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